

CANADA'S COMING PROPERTY INSURANCE CRISIS

Jason Thistlethwaite

Key Points

- Climate change will erode the conditions necessary for property insurance to remain available and affordable in many areas across Canada.
- Uncertainty combined with inadequate investment and coordination in Canada's disaster management systems increase the exposure of the insurance industry to climate change and the potential for decreases in availability and affordability.
- Property insurance markets are not sustainable without coordinated efforts between all levels of government to:
 - increase investments in hazard and climate change risk mitigation;
 - assess and identify areas where the socio-economic implications of insurance shortages will be disproportionate; and
 - improve awareness about the division of responsibility for hazard risk mitigation between insurers, property owners and governments.

The insurance industry and the economic benefits it provides are not sustainable without a concerted effort by Canadian municipal, provincial and federal policy makers to improve hazard and climate risk management. Unfortunately, decision makers have yet to establish a framework for managing the impact of extreme weather and climate change on property insurance systems.

Insurance generates important economic benefits as it helps loss recovery and incentivizes individuals and communities to reduce risk. For these reasons, insurance has been identified as a critical component in managing hazard and climate change risks. For example, high insurance prices can help governments identify areas where investment in structural defenses (for example, dykes to prevent flooding), restrictions on further development and informing property owners about risk can substantially reduce socio-economic vulnerability to hazards. There is a growing concern, however, that the increasing frequency and magnitude of extreme weather generated by climate change is limiting the conditions necessary for insurance availability and affordability (Kunreuther, Michel-Kerjan and Ranger 2013; Cutter et al. 2012). These events also threaten the solvency of insurers without adequate reserves to cover for large disasters.

How can policy makers sustain and leverage insurance markets as a climate change risk regime? This policy brief describes the background for the role of insurance in governing hazards and climate change, describes challenges facing the insurance system and presents several policy recommendations aimed at sustaining and maximizing the insurance system and its benefits.

Background

Over the last 30 years, insurance markets have experienced an unprecedented increase in payouts generated by extreme weather and natural disasters. Insured losses in Canada have been growing since the early 1980s with a record CDN\$3.2 billion in claims in 2013 (Insurance Bureau of Canada 2014). This trend is not



confined to Canada, as global insured losses have significantly increased during the same period. These losses are attributed to an increase in property damage generated by extreme weather and a “higher concentration of assets in exposed areas” (Swiss Re 2014). Climate change is expected to significantly increase these losses. A warmer atmosphere creates conditions that increase the probability of extreme weather. In addition, most people and key economic activities are located in cities that rely on aging infrastructure, which increases potential vulnerability.

Recurring losses create uncertainty for insurers that lead to shortages in the availability and affordability of coverage as they raise rates to recover costs and limit exposure to high risk locations. Gaps in insurance coverage have already emerged in several US markets in the aftermath of significant coastal flooding generated by hurricanes, including New Orleans, Miami and New York. Exclusions and high prices have also emerged in Calgary and Toronto markets after significant flood events in 2013. Research has confirmed that the availability and affordability of insurance is likely to decrease under climate change with statistical models predicting a significant increase in costs (Cheng Shouquan et al. 2012; Kunreuther, Michel-Kerjan and Ranger 2013).

Shortages of insurance coverage create significant socio-economic hardship as individuals and taxpayers are forced to pay the costs of recovery after an extreme event. Moreover, insurance is also required for individuals to qualify for a mortgage or start up a business, and is thus a critical precursor for economic activity. More specifically, insurance serves as a source of risk governance through differentiated pricing that can incentivize investment by governments or individuals in strategies that reduce risk in exchange for lower premiums. For these reasons, insurance has been identified as a potential “climate change risk regime” that can improve the resiliency of the global economy to extreme weather events. In particular, insurance constitutes an economic proxy that decision makers can use to assess the costs of inaction and the benefits of investment in adaptation.

The insurance industry is a highly regulated sector. Most of these regulations focus on ensuring the industry remains solvent by establishing a minimum amount of capital that is necessary to cover significant liabilities, such as losses from a natural disaster. For example, the European Union’s Solvency II regulation requires that insurers have enough capital to withstand a once-in-200-years loss event. Premiums are also regulated in some markets to ensure that the costs of coverage do not exceed a policy holder’s ability to pay. National insurance regulators are, for the most part, responsible for developing these rules.¹ In addition

1 The United States has adopted a state-level regulatory framework, and the European Union is now moving to a regional approach where rules are harmonized.

to financial regulation, infrastructure, disaster management and land-use policy also have a significant influence on the insurance sector. Inadequate investment in infrastructure and poor building codes, along with disaster relief spending and land use that encourages (re)settlement in high-risk areas, can expose the insurance industry to significant losses that lead to shortages in coverage.

Climate change impacts on insurance have started to gain attention among some governments and regulatory authorities. The Bank of England, for example, recently requested that UK insurers disclose how climate change will affect their business. US and Canadian regulators have adopted a similar approach in recent years, seeking improvements in similar disclosure. As the US survey revealed, however, “most P&C [property & casualty] insurers are paying inadequate attention to climate change risks” (Ceres 2014, 7). Furthermore, policy makers have yet to adequately address the challenges that can limit the availability and affordability of insurance and the strategies necessary to maximize its benefits as a climate change risk regime.

Insurability and Climate Change

Uncertainty

Insurers and property owners lack the information necessary to make informed decisions about risk mitigation strategies. Insurance pricing is based on historical data on the frequency and probability of natural events that cause damage. This approach is akin to “driving down the road by looking at the rearview mirror,” given the potential impacts of climate change. Future projections of climate change must be incorporated into insurance decision making to improve the accuracy of pricing. Most projections are, however, limited in their capacity to inform insurance as they lack the local resolution to identify how risks could change at the property-lot level.

Property owners also face uncertainty generated by insufficient information about their own risk exposure to climate change. For example, in Canada, most flood plain maps that identify locations where flooding is more likely to occur are outdated or unavailable to property owners (MMM Group 2014). As a consequence, most insurance policy holders are unaware of the risks they face. This can lead to a moral hazard whereby property owners limit their actions to reduce vulnerability because they assume insurance will cover damage. Insurers face a similar asymmetry whereby premiums do not reflect the actual exposure to risk and reserves are insufficient to cover a significant loss event.

Inadequate information on risk exposure creates unnecessary confusion among property owners, insurers and governments over who is responsible for reducing vulnerability. This confusion generates reputational and political risks for both

insurers and governments. For example, in the aftermath of the Alberta flooding in 2013, many homeowners were unaware that their property insurance did not cover overland flood damage (current insurance policies cover only sewer backup damage). This gap in coverage generated significant reputational risk for insurers. Complaints from property owners who did not qualify for coverage convinced the Alberta government to intervene and pressure insurers into offering payouts regardless of their contractual obligation. More broadly, political pressure also forced the Alberta and federal governments to offer disaster recovery assistance to property owners who rebuilt in the flood plain. This approach leads to a moral hazard whereby property owners are discouraged from investing in actions that reduce risk, based on a perception that the government will act as an “insurer-of-last-resort.”

To reduce climate change vulnerability, insurers must adjust their premium prices to reflect different risk exposures. Concern that these adjustments could increase reputational risk inhibits insurers from assessing the market rate of risk, which ends up subsidizing individuals living in high-risk areas. These pressures limit the incentive for the insurance industry to invest in the research and risk communication necessary to accurately assess risk, and reduce their policy holders’ vulnerability to extreme events.

Hazard and Disaster Risk Mitigation Deficit

Canadian disaster and hazard risk policy is insufficient for sustaining property insurance availability and has yet to assess the impacts of climate change on insurability. Most of these policies are reactive and focus on recovery through the provision of financial assistance to help property owners rebuild in the aftermath of damage. Proactive measures, such as investments in structural defenses, land-use restrictions or building code updates that improve resiliency for future loss events, are rarely prioritized due to a perception that the upfront costs are too expensive. As a consequence, Canadian communities face a hazard risk mitigation deficit generated by inadequate funding in the preparation necessary to reduce vulnerability.

In January 2015, Public Safety Canada (PSC) announced that it will invest CDN\$200 million to “modernize” hazard risk reduction through a new National Disaster Mitigation Program that supports “shifting from a reactive model to one that allows us to better identify, plan for, and prevent flood risks and the cost for Canadians that comes with them” (PSC 2015). This investment is long overdue, but it is relatively small compared to recent international standards. Whereas PSC has committed CDN\$200 million (CDN\$6 per capita) over five years, the UK government has invested CDN\$4.2 billion (CDN\$49 per capita) in flood risk reduction over six years (DEFRA 2014; PSC 2015). In addition to inadequate investment, the program also fails to address problems generated by the existing fragmented policy approach.

Whereas municipalities are exposed to most of the costs associated with extreme weather, they lack the authority to raise sufficient funds for strengthening critical infrastructure and make land-use decisions that limit future vulnerability. To access financing for infrastructure improvements, municipalities must apply to Infrastructure Canada’s Build Canada program. Allocation of funding tends to bias short-term political interests, such as highly visible buildings, rather than critical infrastructure, such as storm sewer systems or flood dykes. In addition, there is a disconnect between decision making over infrastructure and disaster risk mitigation, which is the responsibility of PSC. Under the new mitigation program, municipalities are encouraged to apply for funding that reduces vulnerability to hazards, but the program does not establish a formal requirement.

Provinces are responsible for developing, through the planning act, land-use planning frameworks that reflect science on hazard exposure and help communicate risks to property owners and developers. For example, flood plain mapping generates the boundaries that municipalities use to identify areas where development is not vulnerable to flooding. Unfortunately, the federal government cancelled the Flood Disaster Reduction Program in the late 1990s, a program that helped finance provincial mapping strategies. As a consequence, most maps are outdated, have yet to be digitized and lack information on how climate change is likely to influence hazard vulnerability. In addition, the implementation and enforcement of land-use planning frameworks is governed by municipalities, which face significant pressure to allow development in high-risk areas as a means of generating tax revenue to sustain existing infrastructure. Planning bodies, such as the Ontario Municipal Board, which provide third-party oversight to planning decisions, remain absent from engaging in municipal decisions that could increase hazard exposure.

Policy Recommendations

Address Canada’s Disaster and Hazard Risk Mitigation Deficit

First, investment in PSC’s new National Disaster Mitigation Program must be increased, as current funding is relatively small when compared to international standards. Second, the new program must adopt a shared governance model with coordinated communication and roles among local, provincial and federal authorities to help reduce fragmentation in Canada’s existing approach. For example, updated flood maps should be developed using a standardized approach coordinated by the federal government, adopted by provinces in their land-use frameworks, including decision making by third-party planning organizations, and communicated to property owners living in high-risk areas. Third, a portion of Infrastructure

Canada's Build Canada fund should be designated for risk reduction projects.

Establish the Socio-economic Case for Sustainable Insurance

The insurance industry needs to work with the research community to identify areas where socio-economic vulnerability is likely to increase as a consequence of insurance shortages caused by climate change risk. A first step involves research that identifies how insurance coverage and prices are likely to change under different climate change scenarios. Canada's disaster risk mitigation program currently lacks information on changing insurability. This is unfortunate as municipalities and provinces could use this information as an economic justification to invest in measures that can reduce vulnerability, such as structural defenses, land-use restrictions and risk awareness. It is often difficult to justify such an investment, given the high up-front costs and uncertainty over a return. Information on insurability can help inform a socio-economic case for improvements in resiliency that ensure Canadians are prepared for extreme weather, but also sustain the important benefits of insurance.

Improve Collaboration and Communication between the Insurance Industry and the Federal Government on Disaster Risk Reduction

The insurance industry and federal government need to facilitate a broad-based discussion on the division of responsibility for disaster risk. Property owners, municipalities, provincial governments, the federal government and the insurance industry all play important roles in protecting Canadians from the harm of extreme weather and natural hazards. The responsibilities of each of these stakeholders in promoting risk mitigation are unclear under the current system. Without a clear division of responsibility for disaster risk management, information asymmetries will continue to cause confusion that creates reputational risk for insurers and governments. Current discussions within the insurance industry on the potential introduction of overland flood insurance provide an opportunity to clearly delineate these responsibilities. If overland flood insurance does emerge, the federal government will no longer be responsible for disaster assistance for property owners who purchase coverage and suffer flooding. But to encourage property owners to invest in risk mitigation, all levels of government must become much more proactive in their risk communication and assessment.

Conclusion

Canadian communities are not adequately prepared for existing and future hazards generated by climate change. A key component of reducing such vulnerability is ensuring that property insurance remains available and affordable. This challenge has yet to be formally addressed by Canadian decision makers at all levels of government. Uncertainties over the impacts of climate change on insurance and inadequate investment in hazard risk reduction policy increase the costs of providing coverage in Canada. This is unfortunate as insurance is a critical economic resource for Canadians: it is necessary to qualify for a mortgage or start a business, helps individuals and businesses to recover in the aftermath of property damage, and helps to educate about exposure to risk. To sustain these benefits, it is critical that governments and insurers coordinate to increase investment in risk mitigation policy, identify areas where insurance shortages could increase socio-economic vulnerability and discuss how climate change and hazard risks should be governed.

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About the Author



Jason Thistlethwaite is a CIGI fellow, as well as assistant professor in the School of Environment, Enterprise and Development in the Faculty of Environment at the University of Waterloo. At CIGI, Jason's research focuses on the implications of the new environmental and climate change risks disclosure regime on the financial sector, and on recommendations to help align policy and industry's resources toward an effective approach to mitigate climate change. To inform this research, Jason works directly with business and government leaders in the insurance, banking, real estate, building and investment industries. His research has been published in a number of academic and industry journals, and he is a frequent speaker and media contributor on Canada's growing vulnerability to extreme weather. Jason holds a Ph.D. in global governance from the Balsillie School of International Affairs.

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Over-the-counter (OTC) derivatives played an important role in the buildup of systemic risk in financial markets before 2007 and in spreading volatility throughout global financial markets during the crisis. In recognition of the financial and economic benefits of derivatives products, the G20 moved to regulate the use of OTC derivatives. Attention has been drawn to the detrimental effects of the United States and the European Union to coordinate OTC reform, but this overlooks an important aspect of the post-crisis process: the exemption of non-financial operators from OTC derivative regulatory requirements.



The Trade in Services Agreement: Plurilateral Progress or Game-changing Gamble?

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Trade analysis in the current moment is understandably focused on mega-regional negotiations, but plurilateral talks also deserve our attention. Plurilateral negotiations leading to a Trade in Services Agreement (TiSA) is the focus of this paper. Barriers to trade in services are distinct and their removal consequential; thus inviting careful consideration and, ideally, public debate. This paper seeks to illuminate developments in negotiations toward the plurilateral TiSA. Just as it has become commonplace to ask whether regional agreements advance economic and political agendas, so is it useful to explore the promise and peril of plurilateral agreements such as TiSA.

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CIGI was founded in 2001 by Jim Balsillie, then co-CEO of Research In Motion (BlackBerry), and collaborates with and gratefully acknowledges support from a number of strategic partners, in particular the Government of Canada and the Government of Ontario.

Le CIGI a été fondé en 2001 par Jim Balsillie, qui était alors co-chef de la direction de Research In Motion (BlackBerry). Il collabore avec de nombreux partenaires stratégiques et exprime sa reconnaissance du soutien reçu de ceux-ci, notamment de l'appui reçu du gouvernement du Canada et de celui du gouvernement de l'Ontario.

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67 Erb Street West
Waterloo, Ontario N2L 6C2, Canada
tel +1 519 885 2444 fax +1 519 885 5450
www.cigionline.org

